NanoSpeed™ Cascaded 1x4 Fiberoptic Switch (Bidirectional)

(Protected by U.S. patent 7,403,677B1 and pending patents)

Product Description

The NS Series 1x4 solid-state fiber optic switch is made of three 1X2 switches. It connects optical channels by redirecting an incoming optical signal into a selected output optical fiber. This is achieved using patent pending non-mechanical configurations with solid-state all-crystal designs, which eliminates the need for mechanical movement and organic materials. The NS fiberoptic switch is designed to meet the most demanding switching requirements of ultra-high reliability, fast response time, and continuous switching operation.

The device can be driven by a cost effective circuit with 12V input voltage and 0-5 V control signal. The switch is bidirectional.

Features

- Solid-State high speed
- Ultra-high reliability
- Low insertion loss
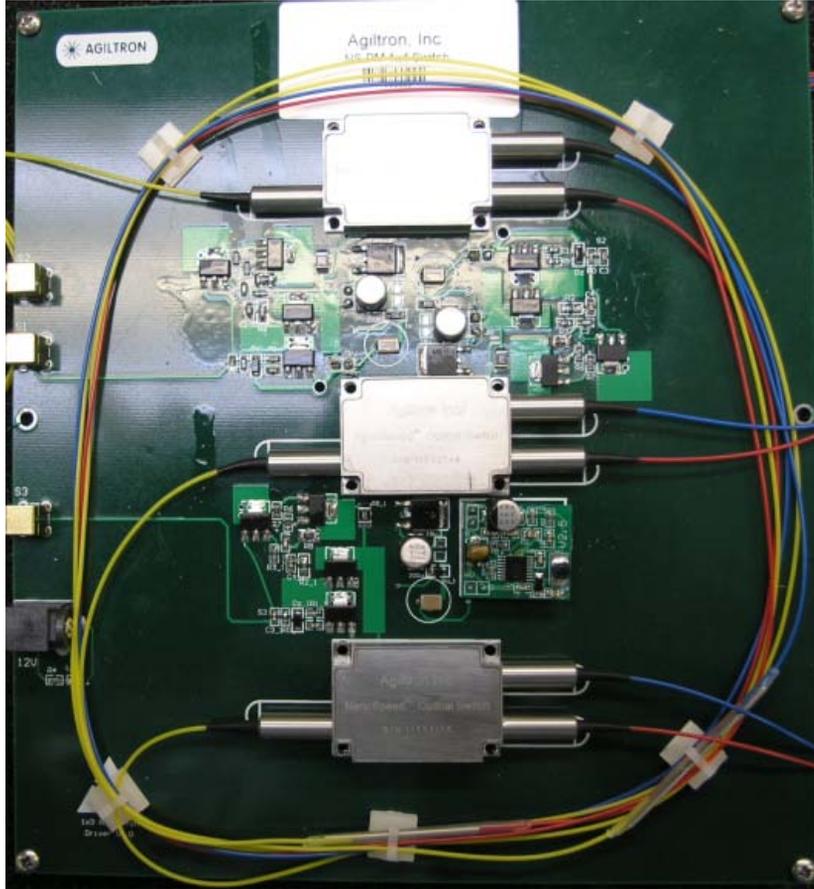- Compact size
- Low cost
- Low power consumption
- Simple driver

Applications

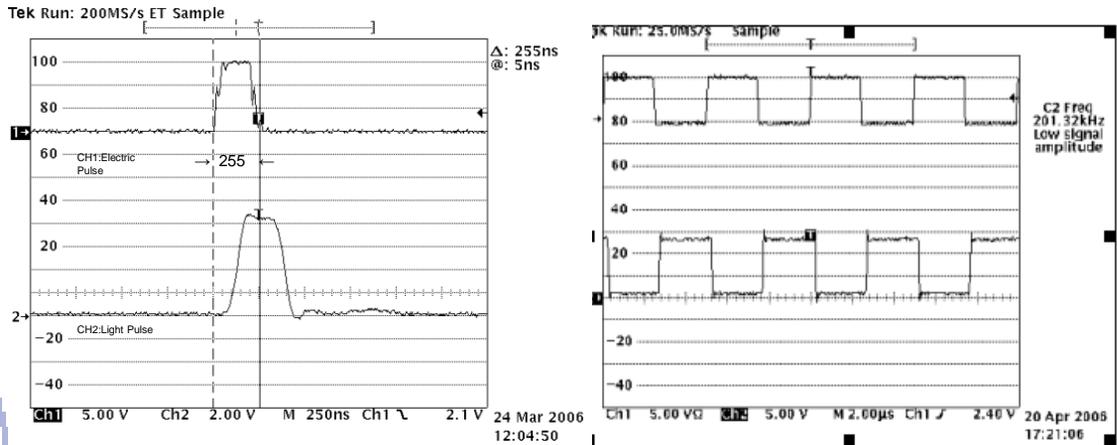- Optical blocking
- Configurable operation
- Instrumentation

Performance Specifications

NS Series 1x4 Switch	Min	Typical	Max	Unit
Operation Wavelength	780		2000	nm
Insertion Loss[1]		1.3	2.0	dB
Cross Talk	20	25		dB
Polarization Dependent Loss		0.15	0.35	dB
IL Temperature Dependency		0.25	0.5	dB
Polarization Mode Dispersion		0.1	0.3	ps
Return Loss	45	50		dB
Response Time (Rise, Fall)			300	ns
Repetition Rate**	DC	5		KHz
Operating Temperature	-5		70	^{o}C
Optical Power Handling***		300		mW
Storage Temperature	-40		85	^{o}C
Package Dimension[2]		184x170		mm

*Driver kit is recommended
** Standard driver. High repetition rate (up to 500 KHz) is available with special circuit.
*** High power version (up to 5W) available.
1. Excluding connectors.
2. Including driving board

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Mechanical Dimensions (mm)

Speed and Repetition Measurement

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※ AGILTRON INC

Bandwidth Measurement

Typical Cross Talk Curve for NanoSpeed Switch/VOA

Y-axis: Cross Talk (dB), range -20 to -40
X-axis: Wave Length (nm), range 1520 to 1580
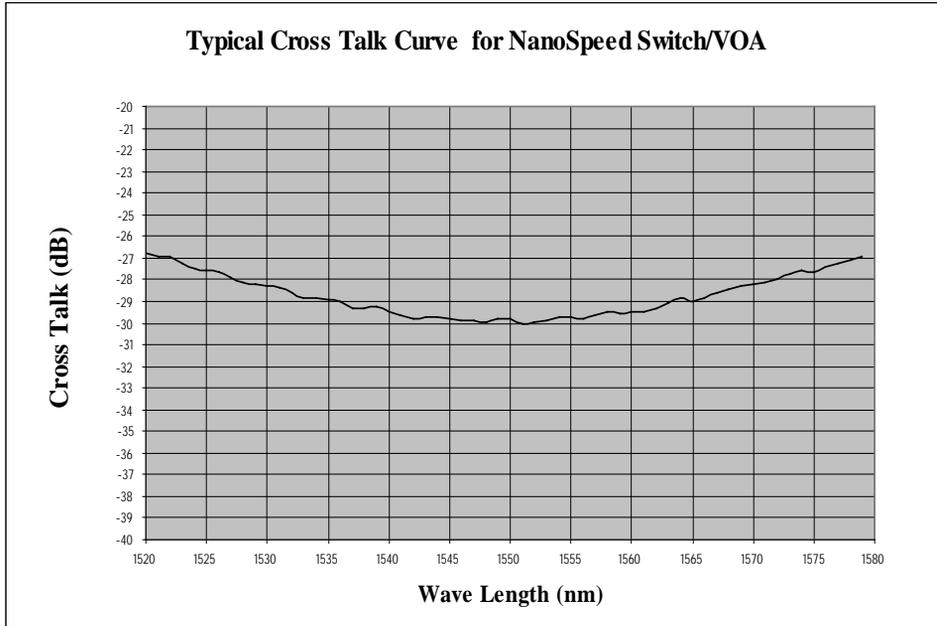
Ordering Information

NSSW-	☐☐	☐	1	1	1	☐	☐	☐
	Type	Wavelength	Configuration	Package	Fiber Type		Fiber Length	Connector
	1x4=14	1060=1 L Band=2 1310=3 1410=4 1550=5 650=6 780=7 850=8 Special=0			SMF-28=1 Special=0	Bare fiber=1 900um loose tube=3 Special=0	0.25m=1 0.5m=2 1.0 m=3 Special=0	None=1 FC/PC=2 FC/APC= 3 SC/PC=4 SC/APC=5 ST/PC=6 LC=7 Duplex LC=8 Special=0